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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/989,145 | 11/21/2001 | Kazuhiko Nimura | P21429 | 9446 |
| 7055 | 7590 | 12/16/2003 | EXAMINER | |
| GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191 | | | MAYO III, WILLIAM H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2831 | |

DATE MAILED: 12/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

09/989,145

Applicant(s)

NIMURA, KAZUHIKO

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 7-13, 15, and 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al (Pat Num 5,133,677, herein referred to as Sato) in view of Audic (Pat Num 4,269,469). Sato discloses a shielded connector assembly (Figs 1-11) for a female-shielded terminal connectable to a shielded cable (Col 1, lines 5-10).

Specifically, with respect to claim 1, Sato discloses an assembly (Figs 1-11) comprising an internal terminal (5) connectable to an inner conductor (24) of a shielded electrical wire (2), wherein the internal terminal (5) includes at least one elastic connecting piece (14) to contact a corresponding male terminal (C), and a dielectric (4) mounted on an outer periphery of the internal terminal (5) to insulate the internal terminal (5) from an external terminal (1) connected to an outer conductor (22) of the shielded electrical wire (2). With respect to claim 4, Sato discloses that the dielectric (4) includes a hole (4a) that extends from a forward end (left of 4a) to a rearward end (right of 4a) of the dielectric (4), wherein the internal terminal (5) being positioned inside the hole (4a, Fig 11). With respect to claim 5, Sato discloses that the hole (4a) is dimensioned to allow movement of the at least one connecting piece (14) toward and away from each other

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(Fig 5). With respect to claim 7, Sato discloses that the assembly (Figs 1-11) further comprises an external terminal (1) covering the dielectric (4) and the internal terminal (5) therein, wherein the external terminal (1) includes holding parts (6) positioned at the front portion (left side) of the external terminal (1) that receive a front end (left end) of the dielectric (4). With respect to claim 8, Sato discloses that the dielectric (4) is blocked shaped (Fig 1) and the holding parts (6) form a square for receiving the dielectric (4). With respect to claim 9, Sato discloses that the external terminal (1) further includes a covering wall part (no shown) positioned rearward of holding parts (6a), wherein the covering wall (not shown) includes an upper open face (at 3) to receive a rear portion of the internal terminal (5). With respect to claim 10, Sato discloses that the external terminal (1) includes a barrel portion (3) positioned rearward of the covering wall part (not shown) wherein the barrel portion (3) includes an open upper face (at 6a) to receive a net braid shield (22) of the shielded electric wire (2) and includes bendable portions (12 & 13) to cover the braided shield (22) of the shielded electrical cable (50, Fig 3). With respect to claim 11, Sato discloses that the external terminal (1) further includes a lance (6) on a lower face of the external terminal (1) and extending toward a front portion of the external terminal (1) and a dielectric (4) further including a hooking groove (Fig 4) on a lower face of the dielectric (4) and extending from a rearward to a forward direction of the dielectric (4) to receive the lance (6) and secure the dielectric (4) and the external terminal (1) together (Fig 4). With respect to claim 12, Sato discloses a method of assembling a female shielded terminal (Fig 1) comprising providing an internal terminal (5) connectable to an inner conductor (24) of a

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shielded electrical wire (2), wherein the internal terminal (5) includes at least one elastic connecting piece (4) to contact a corresponding male terminal (1), mounting a dielectric (4) on an outer periphery of the internal terminal (5), connecting the inner conductor (24) of the shielded wire (2) to the internal terminal (5), providing an external terminal (1) on the dielectric (4) and the internal terminal (5), after mounting the external terminal (1) on the dielectric (4) and the internal terminal (5), connecting the external terminal (1) to the outer conductor (22) of the shielded electrical cable (2). With respect to claim 13, Sato discloses a method wherein the mounting of the dielectric (4) includes covering the at least one connecting piece (14) with the dielectric (4) so that damage to the at least one elastic connecting piece (14) is prevented (Fig 11). With respect to claim 15, Sato discloses a method wherein the dielectric (4) includes a hole (4a) that extends from a forward end (left of 4a) to a rearward end (right of 4a) of the dielectric (4), further comprising positioning the internal terminal (5) inside the hole (4a, Fig 1). With respect to claim 17, Sato discloses a method wherein the assembly (2) further comprises covering the dielectric (4) and the internal terminal (5) therein with an external terminal (1), wherein the external terminal (1) includes holding parts (6) positioned at the front portion (left side) of the external terminal (1) that receive a front end (left end) of the dielectric (4a, Fig 11). With respect to claim 18, Sato discloses a method wherein the dielectric (4) is blocked shaped (Fig 1) and the holding parts (6) form a square for receiving the dielectric (4, Fig 1), further comprising receiving the dielectric (4) with the holding parts (6) so that a forward end of the dielectric (4) abuts the holding parts (6, Fig 11). With respect to claim 19, Sato discloses a method wherein the external terminal

(1) further includes a covering wall part (outside wall portions of 12) positioned rearward of holding parts (6), wherein the covering wall (12) includes an upper open face (Fig 2) to receive a rear portion (14) of the internal terminal (5, Fig 1), receiving a rear portion of the internal terminal (5) in the covering wall part (outside wall portions of 12). With respect to claim 20, Sato discloses a method wherein the external terminal (1) includes a barrel portion (8) positioned rearward of the covering wall part (outside wall portions) wherein the barrel portion (3) includes an open upper face (u shape of 6a) to receive a net braid shield (22) of the shielded electric wire (2) and includes bendable portions (12 & 13) to cover the braided shield (22) of the shielded electrical cable (2, Fig 3) receiving the net braid shield (22) of the shielded cable (2) in the barrel portion (8, Fig 5) and bending the barrel portion (8) around the net braid shield (22) to cover the braided shield (22). With respect to claim 21, Sato discloses a method wherein the external terminal (1) further includes a lance (6) on a lower face of the external terminal (1) and extending toward a front portion of the external terminal (1) and a dielectric (4) further including a hooking groove (Fig 4) on a lower face of the dielectric (4) and extending from a rearward to a forward direction of the dielectric (4) to receive the lance (6) and secure the dielectric (4) and the external terminal (1) together (Fig 4), further comprising receiving the lance (6) in the hooking groove (Fig 4) thereby securing the dielectric (4) and the external terminal (1) together (Fig 4). With respect to claim 22, Sato discloses a method of assembling a female shielded terminal (Fig 1) comprising providing an internal terminal (5) connectable to an inner conductor (24) of a shielded electrical wire (2), wherein the internal terminal (5) includes at least one elastic connecting piece (14)

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to contact a corresponding male terminal (C), mounting a dielectric (4) on an outer periphery of the internal terminal (5), providing an external terminal (1) on the dielectric (4) and the internal terminal (5), connecting the inner conductor (24) of the shielded wire (2) to the internal terminal (5), mounting the external terminal (1) on the dielectric (4) and the internal terminal (5), after mounting the external terminal (1) on the dielectric (4) and the internal terminal (5), connecting the external terminal (1) to the outer conductor (22) of the shielded electrical cable (2).

However, Sato doesn't necessarily disclose the internal terminal being connected to a carrier (claim 1, 12, and 22), nor connecting the internal conductor to the internal terminal after mounting the dielectric on the internal terminal (claim 12), nor the mounting the dielectric to the internal terminal while the terminal remains connected to the carrier and after mounting simultaneously connecting the inner conductor of the shielded cable to the internal terminal and connecting the external terminal to the outer conductor of the shielded electric wire (claim 22).

Audic teaches a contact terminal (Figs 1-13) which is simplified by simultaneously crimping the internal terminal and outer terminal to the coaxial cable (Figs 1-7) and which is linked to other adjacent identical terminals by a carrying strip in order to simplify the assembling of a mass quantity of coaxial cables to the terminals (Col 3, lines 25-30). Specifically, with respect to claims 1, 12, & 22, Audic teaches a terminal (Fig 1) comprising an internal terminal (1) that is connected to a carrier (30, Col 3, lines 25-30). With respect to claim 12, Audic teaches that the dielectric (15) is mounted on the internal terminal (1) prior to the crimping of the flank (12) of the internal

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terminals (1), which connects the core (10) to the internal terminal (1, Col 5, lines 12-27). With respect to claim 22, Audic teaches that the dielectric (15) is inserted on the internal terminal (1, Col 4, lines 40-43), while the terminal is connected to the carrier (30, Col 3, lines 23-31), wherein the flanks (12, 13, & 27) of the internal terminal (1) and the outer terminal (18) are connected to the internal conductor (10) and outer conductor (26) of the shield cable (9) simultaneously (Col 3, lines 25-30).

With respect to claims 1, 12, & 22, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the internal terminal to be connected to a carrier element and to modify the method of terminating the shielded cable of Sato to comprise the method process as taught by Audic because Audic teaches that such a method of terminating a shielded cable provides a simplified method of assembling a plurality of coaxial cables by simultaneously crimping the internal terminal and outer terminal to the internal and outer conductors of the coaxial cable (Figs 1-7) while the terminals are linked to other adjacent identical terminals by a carrying strip in order to simplify the assembling of a mass quantity of coaxial cables to the terminals (Col 3, lines 25-30).

3. Claims 2-3 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (Pat Num 5,133,677) in view of Audic (Pat Num 4,269,469, herein referred to as modified Sato), as applied to claims 1, 12, and 22 above, further in view of Seko et al (Pat Num 5,951,336, herein referred to as Seko). Modified Sato discloses a shielded connector assembly (Figs 1-11) for a female-shielded terminal connectable to a shielded cable (Col 1, lines 5-10) as disclosed above with respect to claims 1 & 12

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above. Specifically, with respect to claim 2, modified Sato discloses at least one elastic connecting piece (3) comprising a pair of connecting pieces (17 & 18) provided on the internal terminal (5). With respect to claim 14, modified Sato discloses at least one elastic connecting piece (14) comprising a pair of connecting pieces (left 17 & 18) provided on the internal terminal (5).

However, modified Sato doesn't necessarily disclose the connecting piece being configured in an L-shape extending from respective facing wall of the internal terminal to a wall of the internal terminal provided between the facing walls, and each connecting piece of the pair of connecting pieces being cantilevered from the internal terminal so that the connecting pieces can elastically sandwich the corresponding male terminal there between (claim 2 & 14), nor the internal terminal having a slit between the connecting pieces that has a bent portion that extends toward each other (claim 3).

Seko teaches a female terminal assembly (Figs 1-9) that overcomes the difficulties of the prior art and aims to provide a terminal fitting wherein entry of foreign matter into the bending space is prevented (Col 1, lines 25-27). Specifically, with respect to claim 2, Seko teaches an internal terminal (A) comprising a connecting piece (12) being configured in an L-shape (Fig 3) extending from respective facing wall (at 14) of the internal terminal (A) to a wall of the internal terminal (A) provided between the facing walls (at 14), and each connecting piece (12) of the pair of connecting pieces (12) being cantilevered from the internal terminal (A) so that the connecting pieces (12) can elastically sandwich the corresponding male terminal there between (Col 2, lines 48-52). With respect to claim 3, Seko teaches an internal terminal (A) further

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comprising a slit (13) between the connecting pieces (12) and each said connecting piece (12) of the pair of connecting pieces (12) includes a bent portion (Fig 5) and extend toward each other (Fig 5). With respect to claim 14, Seko teaches method wherein an internal terminal (A) comprising a connecting piece (12) being configured in an L-shape (Fig 3) extending from respective facing wall (at 14) of the internal terminal (A) to a wall of the internal terminal (A) provided between the facing walls (at 14), and each connecting piece (12) of the pair of connecting pieces (12) being cantilevered from the internal terminal (A) so that the connecting pieces (12) can elastically sandwich the corresponding male terminal there between (Col 2, lines 48-52).

With respect to claims 2-3 and 14, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the internal terminal of modified Sato to comprise the internal terminal configuration as taught by Seko because Seko teaches that such a configuration overcomes the difficulties of the prior art and aims to provide a terminal fitting wherein entry of foreign matter into the bending space is prevented (Col 1, lines 25-27).

4. Claims 6 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato (Pat Num 5,133,677) in view of Audic (Pat Num 4,269,469, herein referred to as modified Sato), as applied to claims 1, 12, and 22 above, further in view of Yamaguchi (Pat Num 5,975,950). Modified Sato discloses a shielded connector assembly (Figs 1-11) for a female-shielded terminal connectable to a shielded cable (Col 1, lines 5-10) as applied to claims 1, 4, 12, and 15, above.

However, modified Sato doesn't necessarily disclose the internal terminal comprising a pair of thrusting pieces, projecting from opposite sides and the dielectric having pressure grooves to receive the thrusting pieces (claims 6 & 16).

Yamaguchi teaches a shield connector assembly (Figs 1-5) wherein the inner conductor is connected to the inner terminal and the outer terminal is connected to the outer conductor to obtain superior shielding effects (Col 2, lines 3-7). Specifically, with respect to claims 6 & 17, Yamaguchi teaches an internal terminal (3) comprising a pair of thrusting pieces (shown at 3' in Fig 1), projecting from opposite sides and the dielectric (7') having pressure grooves (recess that receives 3') to receive the thrusting pieces (at 3').

With respect to claims 6 & 16, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the internal terminal of Sato to comprise the internal terminal configuration as taught by Yamaguchi because Yamaguchi teaches that such a configuration overcomes the difficulties of the prior art and provides superior shielding effects (Col 2, lines 3-7).

Response to Arguments

5. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Chaillot et al (Pat Num 5,989,078) and Embo et al (Pat Num 6,045,402), both of which disclose terminals for coaxial cables having carriers.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Communication

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703)

Application/Control Number: 09/989,145

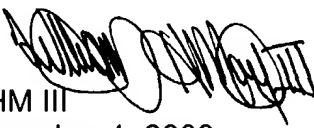
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306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


WHM III
December 1, 2003